any source of infection. Laboratory exam, WBC of 300. Chest × ray showed right lower lobe consolidation in the lung which was confirmed on CT scan. She was started on Vancomycin and Ceftazidime. Ambisome was also added for aspergillus coverage. All the cultures remained sterile and an echo done did not show vegetations. Bone marrow aspirate and biopsy done to rule out recurrence of leukemia showed only hypocellular marrow. The cultures continued to be negative until 4 weeks after admission when the blood grew a Gram-positive weakly acid-fast organism identified by Center for Disease Control (CDC) to be Gordonia polyisoprenivorans.

Discussion: Gordonia polyisoprenivorans is a ubiquitous environmental aerobic Actinomycetes belonging to the family of Gordoniaceae in the order Actinomycetales. Most of the 21 identified species are typically gram positive, catalase positive, weakly acid fast, thin beaded coccobacilli. G. polyisoprenivorans was first described in 1999 as a rubber-degrading bacteria isolated from stagnant water inside a deteriorated automobile tire. Extensive literature review has only identified 2 case reports of bacteremia due to this unusual organism. The 2 earlier case reports highlighted patients with hematological diseases (one with bone marrow transplant and the other with Osler-Weber-Rendu and myelodysplastic syndrome). Our patient although is free from leukemia, is similar in being neutropenic. We believe that hematologically immunocompromised patients with broad-spectrum antibiotics and long term central catheters select the possibility of infection with G. polyisoprenivorans.

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49.023

Spatio-Temporal and Molecular Analyses of a DENV3 Outbreak Show the Dynamics of Dengue Infection (Viral Spread)

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Background: Dengue fever (DH) and dengue hemorrhagic fever (DHF) are important public health issues. Brazil was responsible for 60% of the worldwide dengue cases in 2006 and the virus is endemic in the country. Molecular epidemiology of dengue viruses in endemic areas, associated with spatio-temporal tracking may help to understand the dissemination patterns of viral lineages.

Methods: We followed an outbreak in the city of S.J. Rio Preto - Brazil in 2006. Blood samples from patients with DF and DHF symptoms were collected and tested by RT-PCR. Sequences of NS5 gene from viral genomic RNA were amplified and DENV-3 positive samples were sequenced and compared to other reference sequences for phylogenetic reconstruction. Phylodinamics of DENV-3 was inferred using MCMC-based Bayesian method under the assumption of the dispersion pattern and applied a customized algorithm to obtain the putative spatio-temporal pattern of spread of the disease.

Results: For this analysis we generated a 399 nucleotide-long dataset with 134 taxa by aligning the 82 sequences with 52 reference sequences. DENV-3 samples were closely related to strains circulating in Martinique and in Brazil. Sixty samples formed a monophyletic group, representing lineage 1; 22 samples formed lineage 2. The basic reproductive rate (R0) was 3.765 for lineage 1 and 3.093 for lineage 2. Preliminary studies indicated that both lineages split 1 to 3 years before the last collected sample. They propagated in different regions of the city, North-Western (lineage 1) and South-Eastern (lineage 2).

Conclusion: Our results indicated that spatial analysis associated with molecular epidemiology are important tools to enhance the understanding of the viral strain spread patterns and may be paramount in monitoring an predicting the occurrence of severe forms of dengue. We plan to account in the future for other factors modulating dengue virus dispersion such as climate, adult mosquito density and biology, density of human population and socio-economical aspects.

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49.024

Synchronous Seasonal Activity of *Ixodes ricinus* Immature Stages in Brateiu, Sibiu County, Romania - Implications for TBE Outbreaks

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Background: The two most important tick-borne infections of humans in Europe are tick-borne encephalitis and Lyme borreliosis. While Lyme borreliosis occurs extensively throughout Europe, TBE is far more focal in its distribution suggesting that it requires more narrowly defined conditions for maintenance. In Romania the largest TBE outbreak occurred in Brateiu, Sibiu County. The aim of this study was to define those abiotic and biotic factors that could favor a TBE outbreak.

Methods: Ixodes ricinus (the main vector for TBEV) ticks were collected monthly, for two years, from six sites in Romania (including Brateiu) using the flagging method. The questing ticks' activity was estimated by reporting the collected tick number to 100 m^2. Seasonal dynamics of ticks was compared between the sites. Environmental data were collected during the sampling period, including climate data like temperature, humidity, precipitations etc.

Results: Analyzing the ticks' dynamics we noticed that in Brateiu the immature stages were synchronous for a few months, while in other sites they were not. Thus, in Brateiu approximately 75% of the immature were active during July and August, while in the other sites there was an approximately two months delay of larvae peak activity to that of nymphs activity. Tick numbers were positively correlated to temperatures and humidity from the regional weather stations.

Conclusions: The larval-nymphal synchrony seems to be a prerequisite for the TBEV to be maintained and amplified in nature, and consequently transmitted to humans; this can be explained by the very short period of TBEV infectivity in the rodents (2—4 days) - main reservoirs for TBEV. This synchrony is generated by a faster cooling of air temperatures in autumn and an earlier onset of larval activity in the following year.

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49.025

Seropositivity Among Human Subjects for Both TBEV and *Borrelia burgdorferi s.l.* During a TBE Outbreak in Sibiu County, Romania

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Background: The tick Ixodes ricinus is the main vector of both tick-borne encephalitis (TBE) virus and *Borrelia burgdorferi sensu lato* in Eurasia. *Borrelia burgdorferi* is the cause of Lyme borreliosis, and TBE is a biphasic meningoencephalitis induced by an arbovirus belonging to the flavivirus family. The principal aim of the current investigation is to estimate the TBEV-*Borrelia burgdorferi s.l.* coinfection in human subjects from a TBE outbreak in Sibiu County, Romania.

Methods: Sera and cerebrospinal fluid from 51 patients hospitalized during the TBE outbreak were examined with hemagglutination-inhibition and ELISA techniques for TBEV, and with ELISA test for *Borrelia burgdorferi s.l.*

Results: Among the 51 TBE suspect patients, 38 had antibodies against TBEV. Patients that came out positive showed different symptoms: meningoencephalitis, flu-like syndrome and meningitis. Two of these patients had IgG antibodies against *Borrelia burgdorferi* too. So there was only 5% of the TBE sick patients that came in contact with *B. burgdorferi also*.

Conclusion: Considering the results, our assessment is that the two pathogens antibodies coexistence in such a low number of patients is not consistent with coinfection following tick bite. Also, considering the fact that the overall incidence of TBEV in ticks is 0.5—2% and that of *B. burgdorferi s.l.* can reach values as high as 36%, the investigated TBE outbreak is more likely to have occurred from unpasteurized dairy products' comsumption, conclusion which is sustained also by the observation that in the outbreak area intensive shepherding is practised.

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49.026

Boutonneuse Fever Issusses in Constanta County

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Introduction: Boutonneuse fever is an eruptive disease endemic in Mediterranean basin. Constanta, remain the most important rickettsian endemic zone because the climacterics conditions and the increased number of stray dogs.

Material and methods: The diagnostic was made on clinical and epidemiological dates.

Results: 80% of patients recognized the presence of the dog, and 45% the bites or presence of the ticks. 78% of cases were from urban environment. The adults were prevalent affected 86%, 2:1 for women, children made easy form and the adults' medium. Few cases were severe, with neurological complications. The clinical evolution of the patients with treatment was favorable, improvement of the illness appeared after 3—4 days. The number of cases continuously increases until 2001, the situation of cases with Boutonneuse fever during last 17 years is described in the graph.

Conclusions: The monthly distribution of this disease reflects seasonality of this affection, according with maximum period of thick spreading and human contact with them. The year 2001 as 2000 register in June, especially July and August the pick of morbidity, according to period of maximum spread of ticks and human contacts with them and for these years temperatures were over the multiannual average.

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49.027

Outbreak of Leptospirosis in Children After Tropical Storm in the Dominican Republic

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Background: Leptospirosis is considered one of the most important emerging infectious diseases. Increase of storms and flooding has been associated to the Global warming. Although storm and hurricane hits Dominican Republic almost every year, an outbreak of Leptospirosis was not identified until the tropical storm Noel hit the Dominican Republic on October, 2007. The objective of the study is to describe the epidemiological and clinical characteristic of patients with leptospirosis in this outbreak.

Methods: this is a descriptive, observational and cross-sectional study to determine the clinical and epidemiological characteristics of 60 patients admitted to the Robert Reid Cabral Children's Hospital with a suspicious diagnosis of leptospirosis.

Results: Sixty patients were admitted with diagnostic of suspicious leptospirosis during November 15th to December 15th, 2007. Positive serological confirmations were in 22 patients (36.6%). Male were 68.3% and female 31.7%.